

The Examiner indicates that Meyer, Jr. et al. discloses a portable hands free adapter device for use with a cellular telephone. The Examiner further indicates that Meyer, Jr. et al. does not specifically disclose means for reducing internal howling within the housing. The Examiner further indicates, however, that Li discloses an anti-howling system and method, and that Takahashi et al. discloses a speakerphone including a noise canceling microphone covered up tight in the speakerphone housing. The Examiner further indicates that Takahashi et al. includes echo cancellers, and that use of a system controller indicates that the device can reduce microphone sensitivity or speaker volume. The Examiner indicates that it would have been obvious to apply the speakerphone of Takahashi et al. to a modified system of Meyer, Jr. et al. and Li to generate the claimed invention.

Generally, none of Meyer, Jr. et al, Li, or Takahashi et al., disclose or suggest features of the applicants claimed invention as indicated by the Examiner, including not disclosing or suggesting a cellular speakerphone device that is portable, pocket-sized, or compact.

It is respectfully submitted that Takahashi et al. does not disclose features indicated by the Examiner, including not disclosing a speakerphone device with a pocket-sized housing. The following passages from Takahashi et al. indicate the features, if any, which might be considered to be of limited relevance. Specifically, Takahashi et al. discloses a speakerphone device that includes a noise canceling microphone. Takahashi et al. states, at Col. 4, lines 12-13, "an acoustic echo canceller can be used even when the louder speaker and the speech microphone are incorporated in the same housing." Takahashi et al. further states, at Col. 4, lines 12-13, "appropriate speech characteristics can be obtained without increasing the distance between the louder speaker and the speech

microphone, completely covering the rear of the louder speaker by another part, removing the speech microphone from the housing or using a special directional microphone.”

Takahashi also states, at Col 4, lines 34-36, “the speech microphone and the noise canceling microphone may be covered by a case made of an elastic material. Thereby, the rate of sounds transmitted . . . can be suppressed.”

Recognizing difficulties which can be presented by such a device, Takahashi et al. states, at Col. 2, lines 59-64, with respect to acoustic coupling between the microphone and the speaker, “. . . it is extremely difficult to cancel it. Even when the rear side of the microphone 6 is covered by the rubber case 20, sounds from the speaker 4 are transmitted too large to the microphone 6 through a cover and base forming the housing 15 and mechanical parts such as a circuit board.”

Takahashi et al. recognizes the difficulties that can be presented by placing the microphone close to the speaker within the housing, stating, as cited above, at Col. 4, lines 12-13, “appropriate speech characteristics can be obtained without increasing the distance between the louder speaker and the speech microphone” It is not surprising, then, that Takahashi et al. does not contain, nor has the Examiner cited anything from Takahashi that contains, any indication or suggestion that the disclosed speakerphone device is portable, pocket-sized, compact, or in any way smaller than any typical, non-pocket-sized speakerphone.

The features disclosed by Takahashi are indicated, at most, as being sufficient to enable use of a speakerphone of typical, non-portable dimensions. Indeed, by recognizing the difficulties of placing a microphone near to a speakerphone, and not disclosing a portable, pocket-sized, or compact speakerphone device, Takahashi et al.

implicitly *teaches away* from such a device, and moreover, demonstrates the long-felt need that the applicants' claimed invention solves.

Meyer, Jr. et al. discusses what is referred to as a cellular speakerphone device. The device is operable in a hands-free mode that is automatically interruptible to permit operation in a handset mode using an optional handset coupled to the speakerphone device, allowing positioning of the microphone close to the speaker's mouth. In addressing the issue of acoustic feedback, Meyer, Jr. et al. states:

The optional external microphone 121 decreases acoustic feedback while also increasing the signal-to-noise ratio of the transmit audio (depending upon the proximity of the optional external microphone to the mouth). As a result, the optional external microphone 121 allows for improved hands-free performance

See Meyer, Jr. et al., Col. 8, lines 49-55. Even assuming that the acoustic feedback is substantively identical or related to howling, the solution discussed in Meyer, Jr. et al. is to attach an external microphone to effectively supercede the internal microphone. Furthermore, no further discussion as to the size of the device, or the distance between the speaker and microphone, is provided, and the external microphone attachment can only reduce portability of the device.

The Examiner indicates that the device discussed in Meyer et al. is approximately pocket sized, citing Meyer, Jr. et al., Col. 9, line 9 – Col. 10, line 52. Counsel for the applicants have carefully reviewed the cited passage and Figure discussed, however, and find no indication or suggestion that the device or any housing or the microphone and the speaker is or may be pocket-sized or approximately pocket-sized. In addition, it should be noted that, as stated in M.P.E.P. § 2125 citing Hockerson-Halberstadt,

Inc. v. Avia Group Int'l, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000), when a reference does not disclose that drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. The cited passage of Meyer, Jr. et al. does not contain discussion as to dimensions, nothing in Meyer et al. indicates that the Figures are drawn to scale.

Li discusses an electronic anti-howling system that can be used with a speakerphone. Li does not mention cellular or mobile telephones or speakerphones, and Li does not discuss portable speakerphones or address the size of the speakerphones discussed. As indicated in Li, howling can be a problem in speakerphone devices in which the microphone and the speaker are in close proximity to each other, and echo tends to increase as the microphone is moved closer to the speaker. *See* Li, Col. 1, lines 32-35, and Col. 4, lines 8-9.

As such, none of Meyer et al., Li, or Takahashi et al. disclose or suggest a speakerphone, whether cellular or otherwise, that includes a pocket-sized or approximately pocket-sized housing containing a microphone and a speaker.

Furthermore, by discussing the use of an external microphone attachment to reduce acoustic feedback, Meyer, Jr. et al., if anything, teaches away from features set forth in the claims of the application, including the following: the use of means for reducing internal howling within the housing, as set forth in claim 1; attenuation circuitry and sound insulation to reduce howling, as set forth in claim 19; means for insulating sound positioned within the housing, as set forth in claim 20 and 22; facing the outlet of the loudspeaker in a first direction substantively normal to a plane of the housing and the outlet of the microphone in a second direction substantively normal to the plane of the housing, as set

forth in claim 23; and attenuation circuitry means and sound insulation means positioned between loudspeaker means and microphone means, to reduce howling, as set forth in claim 35.

In addition, the Examiner has not provided any evidence of suggestion or motivation in the prior art to combine the references to achieve the claimed invention, as is required for an obviousness rejection. See e.g. ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 USPQ 929, 932, 933 (Fed. Cir. 1984); *In re Fritch*, 23USPQ 2d 1780, 1783 (Fed. Cir. 1992); *In re Oetiker*, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992). Meyer, Jr. et al. pertains to a cellular speakerphone, whereas Li does not even mention cellular speakerphones. In addition, since Meyer, Jr. et al. mentions only utilizing an external microphone to alleviate the problem of acoustic feedback, Meyer, Jr. et al., if anything, teaches away from the use of an anti-howling system such as described in Li.

Therefore, none of Meyer et al., Li, or Takahashi et al., alone or in combination, disclose or suggest, as set forth in pending claims 1, 19-20 and 22-23, a portable hands-free adapter, or portable speakerphone device, including a pocket-sized or approximately pocket-sized housing containing a microphone and a loudspeaker. Furthermore, none of Meyer et al., Li, or Takahashi et al., alone or in combination, disclose or suggest, as set forth in pending claims 24 and 35, a method for making a portable speakerphone device adaptable for use with a cellular telephone, including providing pocket sized housing means defining an exterior of the device, and disposing loudspeaker means and microphone means within the housing means.

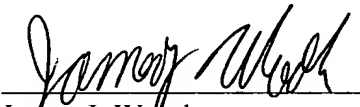
For at least the above reasons, claims 1, 19-20, 22-24 and 35 are patentable

over the cited art. Claims 2-18, 21 and 25-34, which depend either directly or indirectly from claims 1, 19-20, 22-24 and 35, are also patentable over the cited art. Therefore, claims 1-35 are patentable over the cited art, and the applicants respectfully request that the Examiner withdraw the rejection and allow the claims.

For all of the above reasons, the applicants respectfully request that the Examiner withdraw the rejection, and allowance of all the pending claims is respectfully solicited. To expedite prosecution of this application to allowance, the examiner is invited to call the applicants' undersigned representative to discuss any issues relating to this application.

Respectfully submitted,

Dated: 9/2/03


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